

Application No. 10/046,434  
Amendment Dated August 14, 2003  
Reply to Office Action of May 28, 2003

**AMENDMENTS TO THE CLAIMS**

This listing of claims will replace all prior versions, and listings, of claims in the application:

**Listing of Claims:**

Claims 1-17 (Canceled).

18. (Currently Amended) A ceramic film produced by ~~the process of producing a ceramic film on a substrate, said-a process comprising:~~

*B1*  
preparing a film-forming fluid comprising a ceramic precursor, a catalyst, a surfactant and solvent(s);

depositing said film-forming fluid on said substrate; and

removing said solvent(s) from said film-forming fluid on said substrate to produce said ceramic film on said substrate,

wherein said ceramic film has a dielectric constant below 2.3, and a metal content of less than 500 ppm.

19. (Previously Presented) The ceramic film of claim 18, wherein said dielectric constant is from 2.2 to 1.3.

20. (Currently Amended) The ceramic film of claim 18, wherein ~~said-a~~ halide content is less than 500 ppb.

21. (Previously Presented) The ceramic film of claim 18, wherein said metal content is less than 1 ppm.

22. (Previously Presented) The ceramic film of claim 18, wherein said metal content is less than 100 ppb.

23. (Currently Amended) The ceramic film of claim 18, having a porosity of about 50~~40~~% to about 80%.

24. (Previously Presented) The ceramic film of claim 18, having a porosity of about 55% to about 75%.

25. (Currently Amended) The ceramic film of claim 18, wherein said film includes pores sufficiently ordered in a plane of the substrate that an X-ray diffraction pattern of said film shows a Bragg-diffraction peak at a d spacing greater than about 44 Å.

*Br1  
cont*

26. (Currently Amended) The ceramic film of claim 18, wherein said film does not include pores sufficiently ordered in a plane of the substrate such that an X-ray diffraction pattern of said film shows a Bragg-diffraction peak.

27. (New) A ceramic film having a dielectric constant below 2.3, a metal content of less than 500 ppm and a porosity of about 40% to about 80%.

28. (New) The ceramic film of claim 27, wherein said dielectric constant is from 2.2 to 1.3.

29. (New) The ceramic film of claim 27, wherein a halide content is less than 500 ppb.

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30. (New) The ceramic film of claim 27, wherein said metal content is less than 1 ppm.

31. (New) The ceramic film of claim 27, wherein said metal content is less than 100 ppb.

32. (New) The ceramic film of claim 27, having a porosity of about 50% to about 80%.

33. (New) The ceramic film of claim 27, having a porosity of about 55% to about 75%.

34. (New) The ceramic film of claim 27, wherein said film includes pores sufficiently ordered in a plane of the substrate that an X-ray diffraction pattern of said film shows a diffraction peak at a d spacing greater than about 44 Å.

35. (New) The ceramic film of claim 27, wherein said film does not include pores sufficiently ordered in a plane of the substrate such that an X-ray diffraction pattern of said film shows a diffraction peak.

36. (New) The ceramic film of claim 27, having a median pore size less than about 50Å.

37. (New) The ceramic film of claim 23, having a median pore size less than about 50Å.